



Office of the City Auditor

Reclaimed Water Distribution System Rates Report No. 0030

May 10, 2001

Water Resources management requested an audit of the Reclaimed Water Distribution System Rates. We found rates are recovering costs as intended; however, Water Resources needs to develop and formalize policies and procedures to ensure consistent treatment of costs and accuracy of calculations. There is limited matching of revenues and costs and lack of documentation supporting some rate components. Water Resources is in the process of establishing policies and procedures that will address these issues.

CITY COUNCIL

**Mayor
Mary Manross**

**Council
Cynthia Lukas
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May 10, 2001

To the Most Honorable Mary Manross, Mayor
and Members of the Scottsdale City Council

Transmitted herewith is the report of our evaluation of the City of Scottsdale Reclaimed Water Distribution System (RWDS) Rates, Report No. 0030. This work was initiated at the request of Water Resources management.

During our audit we noted an issue that needs to be addressed and included in an adopted City Financial Policy. This issue impacts the calculation of RWDS rates as well as other rates established by the Water Resources Department, Solid Waste Division, and Airport Operations.

The City practice is to charge these enterprise funds franchise fees and in-lieu taxes similar to those that would be paid by businesses operating in Scottsdale. These fees are charged against the enterprise funds and become a revenue source to the City's general fund. Based on inquiry and research, we could not find a Council approved policy document that provides for these fees.

Unlike third party agreements with service providers such as the cable television franchise, we could find no documented franchise agreement or other policy document that would establish the appropriate franchise fee for the Water Resources Department. Currently, Financial Services charges Water Resources (and thereby the RWDS cost center) a franchise fee of 5 percent of the budgeted revenue.

The practice of charging an in-lieu tax is also not documented. We noted that the process of charging an in-lieu tax against the value of property held by the enterprise fund is subject to errors in calculations. Financial Services had not lowered the percentage used to establish the valuation to reflect the amount established by state statute. We could not determine that procedures were adequate to ensure that the fixed asset schedule maintained by Financial Services is accurate. As a result, there is limited assurance that the valuation of property used in the calculation is accurate.

We recommend that the City Council direct the City Manager to revisit the practice of charging franchise fees to the Water Resources enterprise funds and in-lieu taxes to the Water Resources, Solid Waste, and Airport Operations enterprise funds. If it is prudent to continue this practice, then:

- A policy should be adopted that sets out the appropriate franchise fee to be charged to Water Resources, and a process should be developed to ensure that the franchise fee is based on actual revenues, not budgeted revenues.
- A policy should be adopted that sets out the requirement for enterprise funds to pay an in-lieu tax, and procedures should be developed to ensure that the valuation is accurately calculated. Financial Services and management for the three enterprise funds should, annually, review the fixed asset schedule and determine that it accurately reflects the property valuation.

If you need additional information or have any questions, please contact us at 480-312-7756.

Respectfully submitted,

A handwritten signature in black ink that reads "Cheryl Lee Barcala". The signature is written in a cursive, flowing style.

Cheryl Barcala, CIA, CPA, CFE, CGFM, CISA, CISSP
City Auditor

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EXECUTIVE SUMMARY

This audit was initiated at the request of Water Resources management. Fieldwork was initiated in January 2001 and concluded in February 2001. Stella Fusaro, Auditor-in-Charge, and Michael Spletter performed the work. Audit work was conducted in accordance with generally accepted government auditing standards as they relate to expanded scope auditing as required by Article III, Scottsdale Revised Code §2-117 *et seq.*

The objectives of the audit were to:

- Determine if rates charged are calculated in compliance with contract terms.
- Evaluate contract terms to determine whether the terms result in a fair and accurate charge for the water in relationship to the City's cost to deliver the water and maintain the pipeline.

To make this determination we:

- Evaluated the methodology for all rate components to determine whether the methodology reasonably reflects RWDS costs.
- Traced a sample of direct costs charged to RWDS cost centers 57990 (administrative) and 57991 (operating) to supporting documentation.
- Compared components used to set RWDS rates to the contract's allowable costs.

The Water Resources General Manager and Water Resources Operations and Planning Director have read the audit report and concur with the overall findings. Water Resources management is in the process of implementing recommendations and developing and formalizing policies and procedures for the rate setting process. The written management response can be found in the Appendix.

Results in Brief

The Water Resources Department is in compliance with the terms of the Pipeline Capacity Agreements. Costs are being recovered and the Department has made efforts to include all costs allowed by the Agreements.

We did, however, find some areas where improvements are possible. There were a number of miscalculations and timing differences that affect the accuracy of the rate. Individually, the effect of any factor was minor. Costs are recovered on a lagging basis, and there is no matching of revenues and expenses that would lead to an accurate breakeven point. The Pipeline Capacity Agreements are vague, and currently, Water Resources does not have formalized policies and procedures that guide the rate setting process.

To address these issues, we recommend:

- Policies and procedures be formalized and improved to provide guidance regarding the rate setting methodology and ensure consistency and accuracy of rates.
- Costs be tracked and documentation maintained to ensure that all costs charged to RWDS can be substantiated.

The Action Plan on the following page details our recommendations to enhance accuracy and consistency, and includes management's response.

Action Plan

Italics indicate Water Resources management comments.

No.	Management Response		Implementation Status		RECOMMENDATIONS
	AGREE	DISAGREE	UNDERWAY	PLANNED	
1	Agree			Fall 2001	<p><u>Water Resources should:</u></p> <p>Formalize and improve written policies and procedures to provide guidance regarding the RWDS rate setting methodology and ensure consistency and accuracy of rates.</p> <p><i>Water Resources plans to have written policies and procedures in place by the time the 2002 rate is calculated in the fall of 2001.</i></p>
2	Agree			June 2001	<p>Track costs and maintain documentation to ensure that all costs charged to RWDS can be substantiated.</p> <p><i>Procedures will be developed to reconcile and monitor monthly trial balances to assure charges are appropriate.</i></p>
3	Agree			Fall 2001	<p>Develop and formalize procedures to ensure that all costs of electricity for RWDS pump stations will be accurately captured and reflected on the City's financial records. These procedures should ensure that only costs associated with the System are charged to the RWDS cost center and include a reconciliation of expenses. Any errors identified during the reconciliation should be corrected.</p> <p><i>Procedures will be developed to reconcile and monitor monthly trial balances to assure charges are appropriate.</i></p>
4	Agree			Fall 2001	<p>Establish a documented methodology for the calculation of the cost of treating the effluent. These procedures should require:</p> <ul style="list-style-type: none"> a) Documentation to support all calculations and estimates used when establishing rates. b) Annual calculations of labor rates based on average actual salaries and costs of benefits. c) Tracking the cost per kilowatt to determine the correct rate to use. <p><i>Water Resources will develop written policies describing how and why the effluent charge is calculated.</i></p>

No.	Management Response		Implementation Status		RECOMMENDATIONS
	AGREE	DISAGREE	UNDERWAY	PLANNED	
5	Agree			Fall 2001	<p>Reexamine the allocation of costs to the chlorine building and equipment to determine the correct cost of that asset component.</p> <p><i>Water Resources will reexamine and document the calculations in writing.</i></p>
6	Agree			Fall 2001	<p>Develop and formalize procedures that establish a more accurate charge to RWDS for water purchased by the City.</p> <p><i>Water Resources will develop written procedures.</i></p>
7	Agree			End of Fiscal Year 2001	<p>Consider adjusting the rates for the difference between the simple average cost used previously and the rate calculated based on weighted average cost. In the future, the weighted average cost should be used.</p> <p><i>Weighted cost average will be examined, written procedures will be developed, and appropriate adjustments will be made at fiscal year end to account for accurate costs. The process will be communicated to subscribers.</i></p>
8	Agree			Fall 2001	<p>Develop and formalize procedures to ensure that only supported expenditures are charged against the RWDS cost center. These procedures should include a process to reconcile work orders to payroll timesheets to ensure that all time spent on RWDS is charged to RWDS.</p> <p><i>Written procedures will be developed to look at work order credits for appropriate costs.</i></p>
9	Agree			Fall 2001	<p>Include all appropriate RWDS cost accounts in the calculation of indirect rates.</p> <p><i>All cost accounts will be included in next rate.</i></p>
10	Agree			May 2001	<p>Request that Financial Services annually verify the appropriate rates set by state statute for property valuation. Request that an analysis of the past three in-lieu charges be undertaken to determine whether or not refunds should be made to the enterprise funds.</p> <p><i>Water Resources will request that Financial Services verify annually.</i></p>

No.	Management Response		Implementation Status		RECOMMENDATIONS
	AGREE	DISAGREE	UNDERWAY	PLANNED	
11	Agree			June 2001	<p>Verify the fixed asset schedule maintained by Financial Services annually, and ensure that it accurately reflects the RWDS valuation. This fixed asset schedule should then become the source for any calculation based on property value.</p> <p><i>Water Resources will establish a review process with Financial Services.</i></p>
12	Agree			Fall 2001	<p>Prepare an annual adjustment to the franchise fee transferred to the City's general fund to reflect the difference in the revenue budgeted and the revenue earned.</p> <p><i>Water Resources will implement and develop written procedures.</i></p>
13	Agree			Fall 2001	<p>Revisit the need for an operating reserve with the Pipeline Capacity Agreement holders and determine whether or not this is an appropriate reserve.</p> <p><i>Water Resources will develop a written policy and will communicate with Pipeline Capacity Agreement holders.</i></p>
14	Agree			May 2001	<p>Establish a replacement reserve on the City's financial system. Hook-up fees should be credited against the replacement reserve rather than a revenue account.</p> <p><i>Water Resources will request that Financial Services establish a reserve account on the City's Financial System. Future hook-up fees will be credited to the reserve rather than revenue.</i></p>
15	Agree			Fall 2001	<p>Eliminate the practice of setting rates on prior year actual consumption and expenses in favor of a process that projects usage and expenditures. An annual reconciliation of revenue to expenditures could still be completed to ensure that the rates did not result in excess revenues.</p> <p><i>Water Resources will implement expected consumption and anticipated changes in costs.</i></p>
16	Agree			Fall 2001	<p>Revisit the Pipeline Capacity Agreements with subscribers and reach a consensus on the appropriate replacement reserve, use of funds held in reserve, and the disposition of interest earnings and revenue overages. This understanding should be documented in either a modification to the agreement or a memorandum of understanding signed by all the parties.</p> <p><i>Water Resources will write procedures on this process and provide them to subscribers.</i></p>

BACKGROUND

The RWDS or System provides non-potable water to golf courses north of the Central Arizona Project (CAP) canal. It was created in the early 1990s as part of the City's goal to reduce the reliance on groundwater pumped from the Carefree sub-basin for irrigation of golf courses in the northern area of the City.

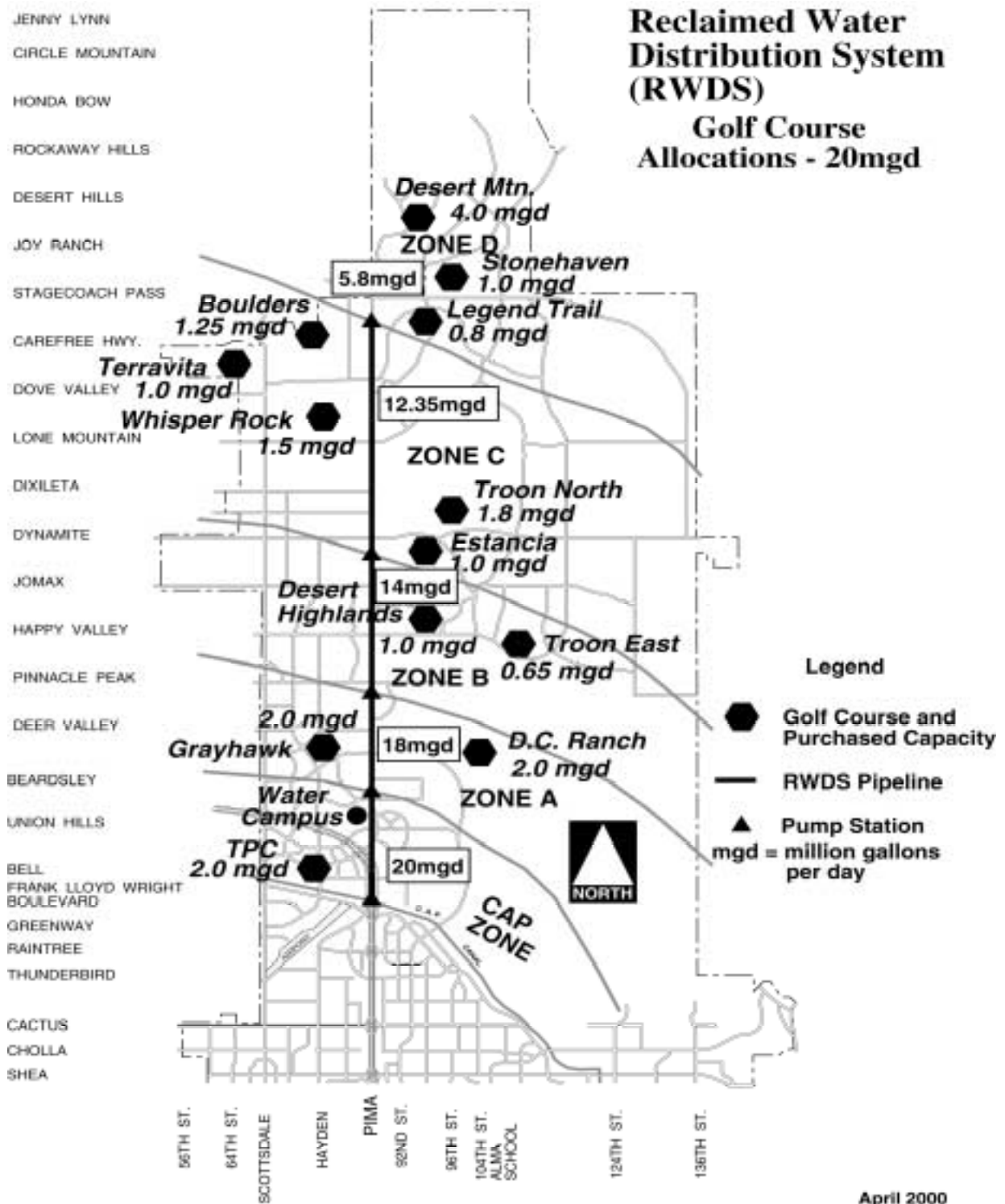
The construction of the RWDS was included in the City's Water Resources Management Plan, "Wastewater Collection/Wastewater Reclamation Master Plan," prepared in 1987. As a component of this master plan, the City obtained voter approval for a state-of-the-art water treatment plant as part of the 1989 bond issue. Under this plan, influent that would have been delivered to a water treatment plant in Phoenix would be delivered to the City's water treatment plant instead. There it would be processed to a non-potable standard and delivered to golf courses. To provide sufficient water to meet the demands of the golf courses, effluent would be supplemented with surplus CAP water.

The RWDS was designed with a 20 million gallon per day (mgd) capacity to serve the projected number of golf courses planned north of the CAP canal. However, because some courses were ultimately designed to use less water, the System will serve 22.5 courses owned by 18 participating parties who purchased rights to a portion of the capacity. Under the terms of the agreements for participation in the RWDS, once non-potable water could be delivered to a participating golf course, no groundwater could be used for landscape watering purposes unless there was a failure in the distribution system or other emergency. Exhibit 1 is a map of the RWDS, and Exhibit 2 lists the participating courses as of October 2000. The two courses highlighted are not currently using their allotment.

The following insert includes terminology used in this report.

<i>Influent -</i>	<i>Untreated domestic, commercial, industrial, institutional, recreational, and storm wastewater flowing in the City's sanitary sewage system.</i>
<i>Effluent -</i>	<i>Treated wastewater that has undergone filtration and chlorination in the City's Wastewater Treatment Plant.</i>
<i>Secondary Effluent -</i>	<i>Treated wastewater that has not been filtered.</i>
<i>Non-potable -</i>	<i>Surplus CAP water withdrawn from the CAP canal, treated effluent from the Wastewater Treatment Plant, and a combination of these.</i>

Exhibit 1



SOURCE: Map prepared by Water Resources.

Exhibit 2

October 2000

RECLAIMED WATER DISTRIBUTION SYSTEM (RWDS)			
USER DATA			
Course Name	Date of Pipeline Capacity Agreement	Purchased Capacity (mgd)	Month/Year On Line
Black Mountain (Terravita)	12/20/93	1.00	Apr-94
Boulders 1	02/03/92	0.50	Oct-93
Boulders 2	12/19/94	0.75	Jul-95
DC Ranch 1	02/03/92	1.00	Jan-96
<i>DC Ranch 2</i>	<i>02/03/92</i>	<i>1.00</i>	-
Desert Highlands	02/03/92	1.00	Apr-93
Desert Mountain Properties	02/12/91	4.00	May-93
Estancia	12/16/94	1.00	Nov-95
Grayhawk 1	06/06/94	1.00	Jun-94
Grayhawk 2	10/18/94	1.00	Jun-95
Legend Trail	07/05/94	0.80	Jul-94
Stonehaven	09/07/99	1.00	Jul-00
Tournament Players Club	02/12/91	2.00	Apr-93
Troon Golf & Country Club	07/15/96	0.65	Apr-97
Troon North 1	02/03/92	1.00	Jun-95
Troon North 2	10/17/94	0.80	Oct-96
Whisper Rock 1	02/03/92	1.00	Aug-00
<i>Whisper Rock 2</i>	<i>12/18/95</i>	<i>0.50</i>	-
	TOTAL	20.00	

Bold Italics = Users not yet utilizing their purchased capacity. (Anticipated to be utilized in Spring 2001 or 2002.)

SOURCE: Prepared by Water Resources.

The Start of the System

RWDS began in 1991 with an agreement between Desert Mountain Properties (Desert Mountain) and the City. Desert Mountain owned a self-contained wastewater treatment plant that produced effluent for use on its development and a water utility company, Carefree Ranch Water (CRWC) that served a variety of customers. CRWC also owned an annual allocation of CAP water rights. Under the terms of the agreement, the City purchased all of the assets of CRWC as well as those related assets owned by Desert Mountain. The City assumed the responsibility for providing water to customers who would have been served by CRWC.

The agreement also set out terms for the financial participation in the development of the RWDS trunk line, booster stations, and other facilities. The City contributed \$5 million, which has been fully recovered, and participants buying capacity in the System paid the remaining cost of construction.

In 1994, delivery of untreated CAP water was started. In 1998, with the opening of the Water Campus Wastewater Treatment Plant (Plant), the first effluent was delivered. As the phasing in of the Plant continues, the amount of effluent delivered will increase. Currently, the Plant is capable of treating 12 million gallons per day (mgd) with a projected capacity of 24 mgd after the completion of the remaining phases.

Use of effluent requires filtration and disinfection to standards required by Arizona Department of Environmental Quality. Water delivered by the RWDS is subject to a Reclaimed Wastewater Reuse Permit with the State of Arizona dated October 22, 1998. Under the terms of the permit, the volume of treated wastewater delivered through the System will be increased from an average daily flow of 8.5 mgd in 1998 to 12.5 mgd in 2003. CAP water will supplement the balance of water needed for the golf courses.

Participation in the System

Because capacity is limited, participation in the System is controlled through the purchase of the rights to capacity. Each owner has a Pipeline Capacity Agreement with the City and all capacity rights have been sold. Participants were required to construct the necessary infrastructure to carry the water from the trunk line to their property. The infrastructure was then dedicated to the City. As well, a hook-up fee was required to provide funds to offset the cost of trunk line construction.

An owner may assign their capacity to a purchaser of the property provided the City is notified and the owner rescinds ownership and rights to the capacity. Capacity may also be assigned to the City. The City will reimburse the owner the

amount equal to what the owner paid, plus interest, from the date of assignment once the capacity has been sold. Only hook-up fees are subject to reimbursement.

Basics of the System

RWDS is 14 miles of pipeline and 5 related booster stations running north from the City's Water Campus along the Pima Road Alignment. Water enters the System from either the CAP canal or the Water Campus Wastewater Reclamation Plant. Each property has a main line to deliver water from the trunk line. This is the point where water is metered to calculate water used by each course.

The City is responsible for the operation and maintenance of the System. Costs and revenues associated with RWDS are accounted for separately. Under the terms of the participation agreement, each course pays a rate per gallon. The rate is calculated to recover all costs to own and operate the System.

Calculation of Rates

RWDS rates are calculated annually. The rate for the new calendar year is based on prior fiscal year historical costs with the exception of CAP water. CAP water is based on the actual rate projected by the Central Arizona Water Conservation District (CAWCD).

The Water Resources Department calculates a base charge per acre-foot. CAP water and effluent are charged per acre-foot of usage and electricity charges are computed based on five zones. Golf courses that are the farthest north pay the highest electricity rate as it costs more to pump the effluent to them.

The base rate includes direct operating costs, a replacement and construction fund, indirect charges consisting of general fund indirect, franchise fees, in-lieu property tax, and a percentage of Water Resources administrative costs similar to those paid by other Water Resources customers. The indirect charges, franchise fees, and in-lieu property tax expenses are established by the City and paid into the City's general fund. Water Resources reconciles revenues and costs annually. Prior to 2000, any over or under charges were included as a debit or credit to the following year's rate. Settlements are now handled as a refund or billing to subscribers.

For calendar year 2000, the base charge per acre-foot, without electricity and water costs, was \$156.25 (i.e., \$0.4795 per 1,000 gallons). Water and electricity charges per 1,000 gallons were \$0.8439 in the CAP Zone, \$0.9838 in Zone A, \$1.0876 in Zone B, \$1.1783 in Zone C, and \$1.2548 in Zone D.

RWDS RATES

Modifications to the Rate Setting Process and Clarification of Agreement Terms Would Improve Accuracy of RWDS Rates

The City is allowed to recover costs associated with obtaining and delivering RWDS water as well as sufficient funds to establish a replacement fund for future repairs. The RWDS rate is based on previous year expenses and consumption. At the conclusion of the year, expenses are compared to revenue and next year's rate is established. In previous years, excess revenue has been rebated or used to lower the next year's rate.

While the methodology applied by the City in setting the rates has complied with the terms of the Pipeline Capacity Agreements, we found that there is limited assurance that there will be a true matching of expenses and revenues when the annual comparison is done. The potential for discrepancies exists because:

- The City pre-pays for purchased water. We found that water for July and August 1999 was charged in Fiscal Year (FY) 98/99. This effectively reduced the cost of water for FY 99/00.
- Expenditures are recorded in the period paid, not when service is received. We found invoices for FY 98/99 electricity costs of \$164,978 posted in FY 99/00. Also, FY 99/00 expenses of \$142,347 were posted to FY 00/01.
- Prior year financial information is not restated when errors are corrected. For example, an adjustment related to the purchase of water in FY 98/99 was posted to FY 99/00.

We also found that controls do not ensure that the over/short calculation is correct and accurately recorded on the City's financial system. This occurs because Water Resources accounting functions are dispersed with no centralized or periodic monitoring. Prior period adjustments are not made, and reserve accounts were not established on the System. The following demonstrates the need for improvement:

- The FY 96/97 indirect rate was used when calculating expenses for FY 98/99. As a result, the overage was understated by \$3,149.
- The FY 96/97 fixed asset valuation was used for the 2000 rate. There is no indication that this amount reflected the current value.

Timing differences and errors in the calculation of the over/short, such as those outlined above, will not be discussed in this report because there is limited impact on the rates. In most cases, rates in future years will offset any potential impact.

This report will be limited to issues that deal with the accuracy of cost-recovery, adherence to the terms of the Pipeline Capacity Agreement, modifications that would make the rate-setting process easier, and clarification of agreement terms that would impact the replacement reserve. Each of these issues will be discussed in separate sections.

Calculation of Rates has Followed Terms Outlined in the Pipeline Capacity Agreements, but Improvements in Tracking Expenses Would Increase Accuracy

There are a number of costs considered to be appropriate RWDS charges. The major components to the rate include:

- Direct costs associated with delivery of water:
 - ▶ Electricity.
 - ▶ Treating the effluent to appropriate water standards.
 - ▶ Non-potable CAP water necessary to supplement the volume of effluent available.
 - ▶ Direct costs associated with maintaining and operating the System and an indirect cost associated with the Water Resources Department administration.
- Indirect costs, in-lieu taxes, and franchise fees charged by the City to City operated enterprise funds (enterprise funds include Water Resources, Solid Waste, and the Airport).

When we attempted to verify expenses included in the calculation and the supporting documentation, we found a number of errors and miscalculations. While no one item was a material error, the volume of errors points to the need for formalized policies and procedures and periodic monitoring that will ensure consistent treatment of costs.

Better Controls Need to be Developed to Track Direct Costs Related to Delivery of Water

The Pipeline Capacity Agreements provide for the actual recovery of any direct costs associated with operating the delivery system and providing water. We expected to be able to trace expenditures to source documents that supported a reasonable conclusion that costs were related to the RWDS System or the water provided through the System. However, we found instances in which source documents did not agree or where the cost was not adequately supported.

City Needs to Improve Tracking of Electricity Costs

RWDS rates include the actual cost of electricity necessary to operate five pump stations required to deliver water to golf courses. The rate per zone is based on the cost of electricity for those stations. Water Resources staff prepares a schedule of costs per zone using a schedule of billings and adjustments provided by Arizona Public Service (APS).

We obtained APS invoices and compared those invoices to the schedule and information recorded on the City's financial system. We found:

- The schedule did not agree with APS invoices.
 - ▶ There was a December charge in the amount of \$13,256 for pump #97 that was not supported by APS invoices or reflected on the financial system. Overall, the amount on the schedule was \$9,580 greater than the amount reflected on APS invoices.
- There were APS invoices charged to the RWDS cost center for facilities not related to the System.
 - ▶ An amount of \$4,944.25 for SRP service at 8650 E. Thomas Road.
 - ▶ An amount of \$315.65 for Facility SLS10, which is not an RWDS facility.

We believe the errors we found were the result of APS cut-off dates, adjustments that were not posted to the schedule, and a failure to reconcile the schedule to the postings on the City's financial system. Water Resources staff do not verify the accuracy of information posted to the City's financial system. This creates the potential for erroneous charges against the RWDS cost center as well as the potential for appropriate expenses to be charged against another cost center.

We recommend that Water Resources develop and formalize procedures to ensure that all costs of electricity for RWDS pump stations will be accurately captured and reflected on the City's financial records. These procedures should ensure that only costs associated with the System are charged to the RWDS cost center and include a reconciliation of expenses. Any errors identified during the reconciliation should be corrected.

Water Resources Needs to Establish and Document the Calculation of Effluent Cost

The Pipeline Capacity Agreements include a provision to charge the cost associated with treating effluent. The methodology used in the agreements is designed to capture costs over and above what would have been incurred to pass influent on to the treatment plant in Phoenix. The calculation of this cost would include components for labor, electricity, chemicals, and capital costs necessary to undertake the secondary level of filtration.

During our audit, we attempted to verify the accuracy of the rate established by Water Resources to treat the influent. We found that documentation was inadequate to support the rate.

- We could not verify the accuracy of amounts reported for electricity used, number of labor hours, and cost and amount of chemicals used.
- We could not verify the labor rate used.
 - The \$27.50 rate used did not agree with the average salary for the treatment plant operators. The benefit rate was based on a previous Citywide rate instead of current rates. We estimate that the hourly rate used was approximately \$4 higher than the actual rate.
- The capital costs used for the chlorine building and equipment did not agree with documentation.
 - We estimate that the replacement cost used in the calculation was overstated by \$175,000 unless change order amounts were not accurately reflected in the documentation.
- The cost per kilowatt used to calculate the cost of electricity was not supported by documentation.
 - Water Resources staff stated that the rate was an estimate. We calculated the rate for a two-month period and found that the average rate during that time period was \$.06 per kilowatt, a rate \$.04 lower than the rate currently used by Water Resources.

We recommend that Water Resources establish a documented methodology for the calculation of the cost of treating the effluent. These procedures should require:

- 1) Documentation to support all calculations and estimates used when establishing rates.
- 2) Annual calculations of labor rates based on average actual salaries and costs of benefits.
- 3) Tracking the cost per kilowatt to determine the correct rate to use.

We also recommend that Water Resources staff reexamine the allocation of costs to the chlorine building and equipment to determine the correct cost of that asset component.

Procedures Should Ensure the Cost of Purchased Water Charged to RWDS is Accurate

RWDS rates are set to recover costs of water purchased from CAP or any other non-potable water source. The cost charged to RWDS should reflect the cost paid by the City to acquire the water.

During our audit, we reviewed the calculation of the purchased water and found:

- Unmetered CAP water attributable to RWDS was not included in the rate calculation.
 - ▶ It appeared that approximately \$86,780 in purchased water costs would not have been recovered. We discussed this with Water Resources staff prior to the issuance of the 2001 rate, and they have incorporated this cost into the rate.
- The cost of purchased water was based on a simple average of invoiced and adjusted costs of \$61.50 per acre-foot. This methodology did not account for changes in price and usage.
 - ▶ We found that RWDS used more water in periods in which the cost to the City was higher. We calculated the weighted average to be approximately \$66.56 per acre-foot resulting in a potential under-recovery of approximately \$14,385.

We recommend that Water Resources develop and formalize procedures that establish a more accurate charge to RWDS for water purchased by the City.

We also recommend that Water Resources management consider adjusting the rates for the difference between the simple average cost used previously and the rate calculated based on weighted average cost. In the future, the weighted average cost should be used.

Controls Need to be Improved to Accurately Track Costs of Maintaining the Delivery System

The Pipeline Capacity Agreements allow for recovery of the actual costs necessary to maintain and operate the pump stations, RWDS trunk lines, the eight million gallon reservoir, and the main lines. The City tracks these direct costs by recording the expenditures in a separate cost center established for RWDS. In addition to these direct costs, the Water Resources Department also charges the RWDS cost center a percentage of the Water Resources Department administrative costs.

We reviewed the costs assigned to these cost centers and the method used to calculate the indirect rate. We found:

- Salaries charged to the RWDS Operations cost center for the months sampled, did not match work order internal time records.
 - Water Resources does not reconcile time recorded on internal work orders to the payroll timesheets that are used to charge the RWDS account. We also found that internal time records were missing for July 1999.
- Expenses, that should have been allocated as part of the Water Resources administrative cost, were charged as a direct cost.
 - These expenditures included membership dues, a palm pilot, a business conference, and mileage for a Water Resources employee. This employee was assigned to the RWDS cost center but also supported other Water Resources projects.
- Water Resources charged a percentage (70 percent) of the costs associated with a vehicle to RWDS accounts.
 - There was no documentation to support the allocation. Water Resources staff stated that the allocation had remained the same since the inception of the program. As well, we noted that the RWDS account was charged the entire deductible related to an insurance claim for this vehicle. There was no documentation to support the charge to RWDS.
- Water Resources was not including the RWDS administrative expenditure account when establishing the basis for the allocation of the general fund administrative cost allocation.
 - RWDS ratepayers benefited from a lower indirect rate than would have been calculated if the account was included in the calculation.

We recommend that Water Resources management:

- 1) Develop and formalize procedures to ensure that only supported expenditures are charged against the RWDS cost center. These procedures should include a process to reconcile work orders to payroll timesheets to ensure that all time spent on RWDS is charged to RWDS.
- 2) Include all appropriate RWDS cost accounts in the calculation of indirect rates.

Procedures Need to be Developed to Ensure Indirect Charges, In-Lieu Taxes, and Franchise Fees Charged by the City are Accurate

The rate calculation includes three costs charged by the City to City-operated enterprise funds. Enterprise funds are City operations that are operated in a manner similar to a private business. These fees include:

- An indirect rate that is designed to charge enterprise funds for administrative services such as payroll and accounting services.
- An in-lieu tax that is meant to reflect the property tax that would be normally paid by a business.
- A franchise fee similar to the fee charged to companies for use of the City's right-of-way.

During our audit, we verified the amounts charged to the RWDS cost center. We found:

- Financial Services has used the incorrect percentage when calculating the in-lieu property tax.
 - The in-lieu property tax is calculated by multiplying the RWDS fixed asset value by the same percentage used by the County Assessor to arrive at the property tax value. ARS §42-227 specifies the percentage used for water, sewer, and wastewater utilities. The rates were 27 percent for 1997, 26 percent for 1998, 25 percent for 1999, and each tax year thereafter. The rate used by Financial Services was not adjusted to reflect the decrease. As a result, the 27 percent rate was used for the 1998 and 1999 fee calculations causing the in-lieu property tax amounts to be overstated \$1,593 for rate year 2000 and \$1,920 for 2001.
- The asset amount used to calculate the in-lieu property tax did not match the fixed asset schedule maintained by Financial Services.
- The franchise fee is calculated and transferred to the City's general fund using budgeted revenues and is not adjusted when actual revenues are determined.
 - The franchise fee should be calculated and remitted based on actual revenues.

We believe these errors are the result of several factors. First, Financial Services has not verified, each year, that calculations based on state statute or other legal mandates are correct. Second, procedures do not exist to ensure that fixed asset schedules reflect correct amounts. Finally, the method used by the City to

charge enterprise funds for the franchise fee does not mirror the same process used by independent business firms to report the franchise fee.

We recommend Water Resources request that Financial Services annually verify the appropriate rates set by state statute for property valuation. As well, Water Resources should request that an analysis of the past three in-lieu charges be undertaken to determine whether or not refunds should be made to the enterprise funds.

We also recommend that Water Resources annually verify the fixed asset schedule maintained by Financial Services and ensure that it accurately reflects the RWDS valuation. This fixed asset schedule should then become the source for any calculation based on property value.

Finally, Water Resources staff should prepare an annual adjustment to the franchise fee transferred to the City's general fund to reflect the difference in the revenue budgeted and the revenue earned.

The City Needs to Ensure all Requirements of the Pipeline Capacity Agreements are Followed, or Agreements Need to be Modified

The Pipeline Capacity Agreements provide for two types of reserves to be held. The first is an operating reserve meant to ensure that the City holds enough funds to satisfy the operational needs for 45 days. The second is a reserve for the replacement of infrastructure. We verified compliance with these terms and found:

- The operating reserve had not been included as a part of prior year rates and there was no reserve set-up to ensure that funds were held.
 - ▶ According to Water Resources staff, it was their belief that other funds held would be sufficient to satisfy the requirement for the operating reserve. However, we found there are no restrictions on other funds to preclude those funds from being spent. During our audit, Water Resources established an operating reserve using \$500,000 of excess revenue that would have been considered for inclusion in the 2000 rate settlement.
- A new subscriber hook-up fee in the amount of \$501,623 was added to revenue on the City's financial system rather than being placed in a replacement construction fund as required by the contract.

We recommend that Water Resources revisit the need for an operating reserve with the Pipeline Capacity Agreement holders and determine whether or not this is an appropriate reserve.

If it is, then Water Resources should establish a replacement reserve on the City's financial system. Hook-up fees should be credited against the replacement reserve rather than a revenue account.

Procedures Need to be Developed to More Accurately Project Usage and Expenses, Annually Calculate Any Overage or Shortage, and Adjust Rates in a Timely Manner

The intent of the Pipeline Capacity Agreement is for users of the water to pay a fee designed to recover the cost of providing that water. As such, the users should expect that rates be pro-actively managed to reduce any potential for an overage that might need to be refunded or shortage that would need to be recovered in future years. To monitor cost recovery, the City reconciles costs to revenues and adjusts rates. In prior years, when excess revenue has been received, overages have been refunded to subscribers or credited to the subsequent year's rate. It is estimated that revenues collected in FY 2000 exceeded expenses by \$789,000.

As part of our work, we evaluated the rate setting process and found that there are several factors that contribute to the large overage.

- Rates for the upcoming year are based on actual expenses of the previous year. Costs associated with delivering effluent are lower than costs associated with purchased water and the use of effluent is increasing. As a result, until the mix of purchased water and effluent becomes stable, future year costs will continue to be lower than prior years. This will create excess revenues unless the methodology is changed.
- Rates are calculated based on the quantity of water delivered the prior year. This practice does not take into consideration that the System is not yet utilized to capacity. As additional golf courses are brought on, the annual usage increases. When usage is greater than the prior year, excess revenues will be generated because the cost per acre-foot of water will decrease as volume increases.
- Factors considered in rate setting are not consistent as to timing. Rates for the upcoming calendar year are based on actual usage and costs of the previous fiscal year with the exception of purchased water, which uses projected costs and prior year usage. The over/short adjustment should reconcile this, however, the adjustment uses the amounts on the City's financial system. The financial system does not reflect costs incurred for the year, but revenues collected and payments made during the period.

When certain expenses (i.e., franchise fees) are charged to RWDS based on revenues, it is important that rates be set as closely as possible to recover only the

amount necessary to cover current year costs. Any excess revenue only serves to increase the franchise fee paid to the City. While it may be possible to return excess revenues to ratepayers in the form of a rebate, there is no process to recapture the franchise fee on the overage.

We recommend that Water Resources eliminate the practice of setting rates on prior year actual consumption and expenses in favor of a process that projects usage and expenditures. An annual reconciliation of revenue to expenditures could still be completed to ensure that the rates did not result in excess revenues.

Clarifications to the Pipeline Capacity Agreements Would Resolve Several Issues

The RWDS represents a significant asset to the City and is a component that needs to be maintained in good working condition in order to ensure the delivery of water. To plan for costs associated with the repair and replacement of the System, the Pipeline Capacity Agreements allow for a component charge to provide for a replacement/construction fund.

The City has incorporated this amount into rate calculations and significant funds are available. However, we noted several issues with this fund.

- There is no guidance as to the calculation of how much should be reserved and no cap on the amount that could be placed in reserve.
 - We could not determine whether the amount currently held met the intent of the agreements.
- Replacement fund contributions were calculated by using an amortization of existing RWDS assets at historical cost rather than replacement value.
 - If the replacement fund is capped at a percentage of historical asset valuation, there is a potential that sufficient funds will not be retained to repair or replace the infrastructure.
- Pipeline Capacity Agreements do not distinguish between repair costs appropriate to be expended as an operating cost and those expenditures appropriate to charge against the replacement reserve.
 - Without a documented understanding of what expenditures should be considered capital in nature, there is a potential for inconsistent treatment.
- There is no guidance on use of interest earnings from the investment of idle funds.
 - Water Resources uses interest earnings on idle funds to reduce the rate. As the result of an accounting error, the RWDS fund was not receiving a credit for investment of idle funds prior to FY 99/00. When

this error was corrected, the interest was treated as income instead of applied against the replacement fund. This created an artificial spike in income of \$837,721. Allowing interest earnings to be credited against revenue instead of applied against the reserve has the potential to result in one-time rate reductions.

- The Pipeline Capacity Agreements are silent on how to address overages.
 - As mentioned earlier, in prior years, overages were refunded or used to reduce the subsequent year's rate. This year, the City placed the estimated overage from FY 99/00 in the replacement fund. The disposition of these funds should be discussed with subscribers and either rebated based on previous year's consumption or left in reserve and allowed to reduce rates by lowering the amount needed to fund the replacement reserve.

We recommend that Water Resources management revisit the Pipeline Capacity Agreements with subscribers and reach a consensus on the appropriate replacement reserve, use of funds held in reserve, and the disposition of interest earnings and revenue overages. This understanding should be documented in either a modification to the agreement or a memorandum of understanding signed by all the parties.

SCOPE AND METHODOLOGY

The objectives of the audit were to:

- 1) Determine if rates charged are calculated in compliance with contract terms.
- 2) Evaluate contract terms to determine whether the terms result in a fair and accurate charge for water in relationship to the City's cost to deliver water and maintain the pipeline.

We interviewed staff and reviewed the proposed 2001 rate methodology to determine compliance with the Pipeline Capacity Agreements and to determine if rates are fairly and accurately recovering costs. We evaluated the methodology for all cost allocation rate components to determine whether the methodology reasonably reflects RWDS costs.

In addition, we traced a sample of direct costs charged to RWDS cost centers 57990 (administrative) and 57991 (operating) to supporting documentation.

Test #1: Review of RWDS proposed 2001 rates.

Objective: Determine if rates charged are calculated in compliance with contract terms.

Method: Compare components used to set RWDS rates to the contract's allowable costs. Evaluate methodology used to set the rates to determine if it is reasonable and complies with the intent of the Pipeline Capacity Agreements.

We evaluated the methodology for all 2001 cost allocation rate components including Citywide Indirect, Water Resources Administration, Franchise Fees, In-Lieu Property Tax, Replacement Construction Fund Contribution, the effluent rate, adjustment for prior year overage/shortage, fixed assets, and interest earnings.

We also reviewed the methodology for the 2001 direct costs including electricity, CAP water, salaries, other professional services, business conferences, mileage, subscriptions and memberships, computer equipment, refunds, awards and indemnities, contract maintenance for machinery and equipment, materials to maintain machinery and equipment, special phone lines, fleet maintenance and operation, fleet replacement, workers compensation, and property and liability

insurance to determine whether the methodology reasonably reflects RWDS costs. The 2001 rate is based on RWDS actual costs and actual usage of water and electricity for FY 99/00 (July 1, 1999, to June 30, 2000).

- Criteria:** The Pipeline Capacity Agreements allow for rate calculations to include any and all costs to own and operate the System, including:
- 1) The cost to purchase water from CAP or any other non-potable water source.
 - 2) Operation and maintenance of the components at the Wastewater Treatment Plant required to treat secondary effluent so it can be used for the RWDS.
 - 3) Actual energy costs for the five pump stations used to deliver the water from CAP and the Wastewater Treatment Plant (CAP pump station; stations A, B, C, and D; and any other pump stations required).
 - 4) Actual costs to maintain and operate the pump stations, RWDS trunk lines, the eight million gallon reservoir, and the main lines.
 - 5) Repairs to and replacement of the pump stations and pipeline system.
 - 6) Percentage factor for general fund administration, accounting, and billing consistent with the factor charged to all other Water Resources customers.
 - 7) A percentage factor for Water Resources Department administration, accounting, and billing.
 - 8) A franchise fee consistent with the percentage charged to all other Water Resources customers.
 - 9) An in-lieu property tax payment to the general fund consistent with the payment charged to other Water Resources customers.
 - 10) Costs to amortize loans obtained by the City for replacement and/or construction of additional or existing components of the pump stations, trunk line, reservoir, main lines, filtration and disinfection system, and any other component of the Wastewater Treatment Plant required to treat the secondary effluent in order to supply RWDS.
 - 11) A component charge to provide for a replacement/construction fund.
 - 12) Establishment, over the first 12 months, of an operating cash reserve for one month of operation.

- 13) After the first 12 months of operation, maintenance of an operating cash reserve for cash required in a 45-day period of maximum cash requirements.
- 14) Any funds that the City has had to advance to operate and maintain RWDS because there were not sufficient funds available in the RWDS operating fund, plus interest on the amount equal to the interest rate the City actually earned on City funds invested during the period of the advance.
- 15) The City will pay all costs for additional pumps for the CAP pump station and costs associated with the operation and maintenance and direct energy costs when sufficient effluent is available to meet all RWDS requirements, and so long as no water for RWDS is being pumped through the CAP pump station (water is being pumped for City recharge purposes).

Results: The rate setting methodology complies with the requirements and intent of the agreement. The purpose of the calculated rate is to recover the cost of service. To the extent that surpluses have been generated in excess of revenues, costs have been recovered.

The agreement included all listed components, with the exception of #10 (loan amortization), #12 (30-day operating reserve), #13 (45-day operating reserve) and #14 (repayment of operating advances).

Loan amortization costs and repayment of operating advances were excluded because there were no associated costs to be recovered. Cash reserves were not established due to Water Resources' belief that the fund balance could be used to satisfy the requirement for an operating reserve.

Test #2: Review the supporting documentation for FY 2001.

Objective: To determine if the 2001 rate components are fair, accurate, and include only RWDS costs.

Method: Trace direct costs to supporting documentation such as invoices, work orders, timesheets, or journal entries.

All purchases for the main rate components, CAP water, and electricity were tested. All transactions over \$10,000 were also tested. This threshold was chosen due to the materiality of the amount and its effect on the rate. We also randomly selected a

sample of 17 of the remaining 66 transactions (25 percent of transactions) under the \$10,000 threshold. Transactions were selected using Excel's random selection tool.

Transactions were selected from the following Smartstream Accounts: other professional services, special phone lines, contract maintenance and equipment, refund awards and indemnities, materials for maintenance and equipment, mileage, memberships and subscriptions, business conferences, and computer equipment. In addition, one transaction that appeared questionable was selected judgmentally for review.

Salaries, fringe benefits, and overtime were tested separately. We randomly selected 3 months (25 percent of 12 months) using Excel's random selection tool. Hours charged to RWDS on the Payroll Expenditure Data Report were traced to Water Resources monthly summary time reports and individual timesheets.

Criteria: Costs should be recorded accurately and should be directly related to RWDS.

Results: Several factors reduced the accuracy of the rate calculation:

- Electricity and water charges were not matched to the revenue period.
- Some direct costs would be more appropriately charged to other funds.
- The determination of fleet, salary, and effluent costs did not have a solid basis.
- Non-rate revenues have the effect of reducing costs and had not been anticipated by the agreement.
- An authoritative basis for the assessment of the franchise fee and in-lieu property tax cost components could not be determined.

APPENDIX A MANAGEMENT RESPONSE

DATE: April 19, 2001

TO: Cheryl Barcala, City Auditor

THRU: David Mansfield, Water Resources General Manager

FROM: Robert C. Berlese, Water Resources Operations and Planning Director

SUBJECT: Management Response – RWDS Audit #0030

We have reviewed your audit report and concur with the overall finding - that while compliance with Pipeline Capacity Agreements has been maintained, Water Resources should formally document processes and procedures to better track and substantiate costs charged to subscribers. We have designated a finance professional with significant city accounting experience to oversee on a monthly basis all costs associated with the various Divisions and program centers within Water Resources that are involved with the operation of the RWDS and to reconcile the detail transactions with the accounting records.

The continued deployment of laptop computers for our field employees along with further development of our Automated Work Order system during this next fiscal year will enhance our ability to capture all field related maintenance costs not only for RWDS but the entire water and wastewater system as well.

Water Campus staff will be working with the designated finance professional to memorialize and document the methodology used to determine the effluent treatment cost component of the RWDS rate. In addition, this designated staff member is specifically charged with the task of compiling all departmental processes/procedures that have been used in the rate development process for inclusion in a formal procedures manual that will guide all staff on financial related procedures related to the RWDS.

We do concur with the Audit Action Plan and are confident that timelines agreed upon are achievable.

We want to thank you and your staff for your efforts on this audit. As a result of the early expedited feedback from your staff, we were able to incorporate many of your suggestions in the year 2001 rates.

